STATE OF MARYLAND

DHMH

Maryland Department of Health and Mental Hygiene
300 W. Preston Street, Suite 202, Baltimore, Maryland 21201

Martin O'Malley, Governor – Anthony G. Brown, Lt. Governor – Joshua M. Sharfstein, M.D., Secretary

Office of Preparedness & Response
Sherry Adams, R.N., C.P.M, Director
Isaac P. Ajit, M.D., M.P.H., Deputy Director

January 20, 2012

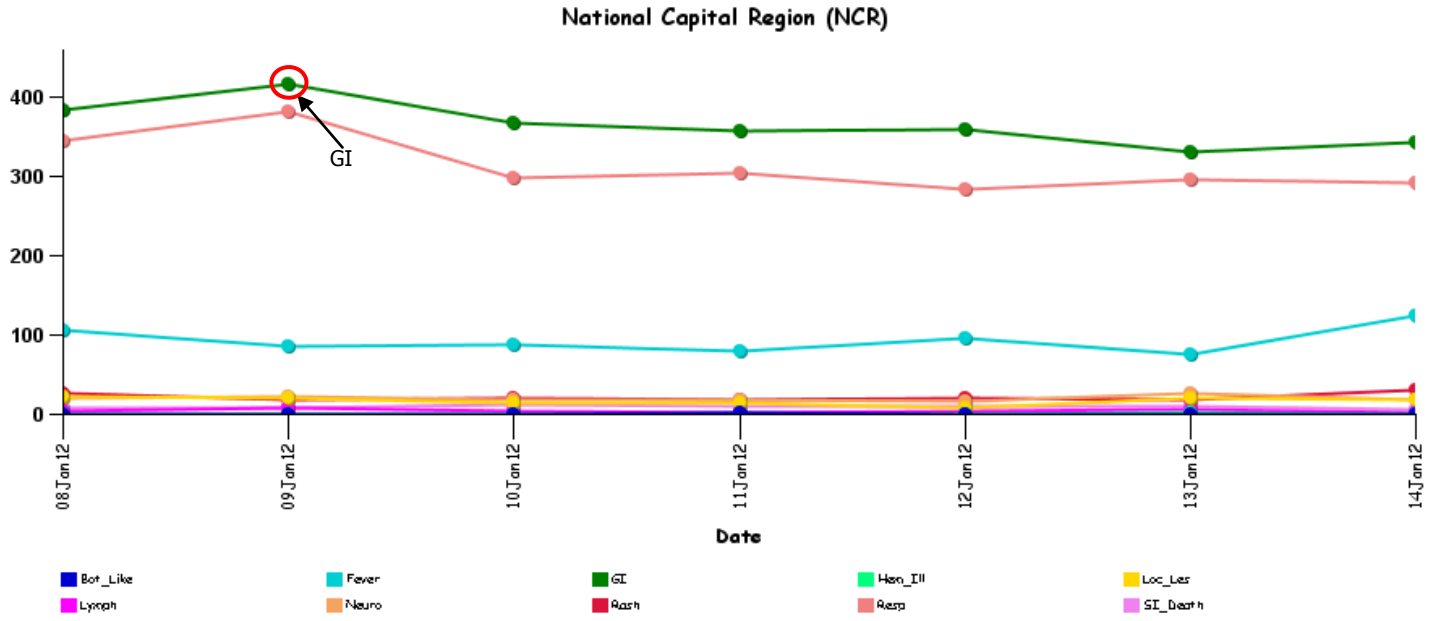
Public Health & Emergency Preparedness Bulletin: # 2012:02
Reporting for the week ending 01/14/12 (MMWR Week #02)

CURRENT HOMELAND SECURITY THREAT LEVELS

National: **No Active Alerts**
Maryland: **Level One (MEMA status)**

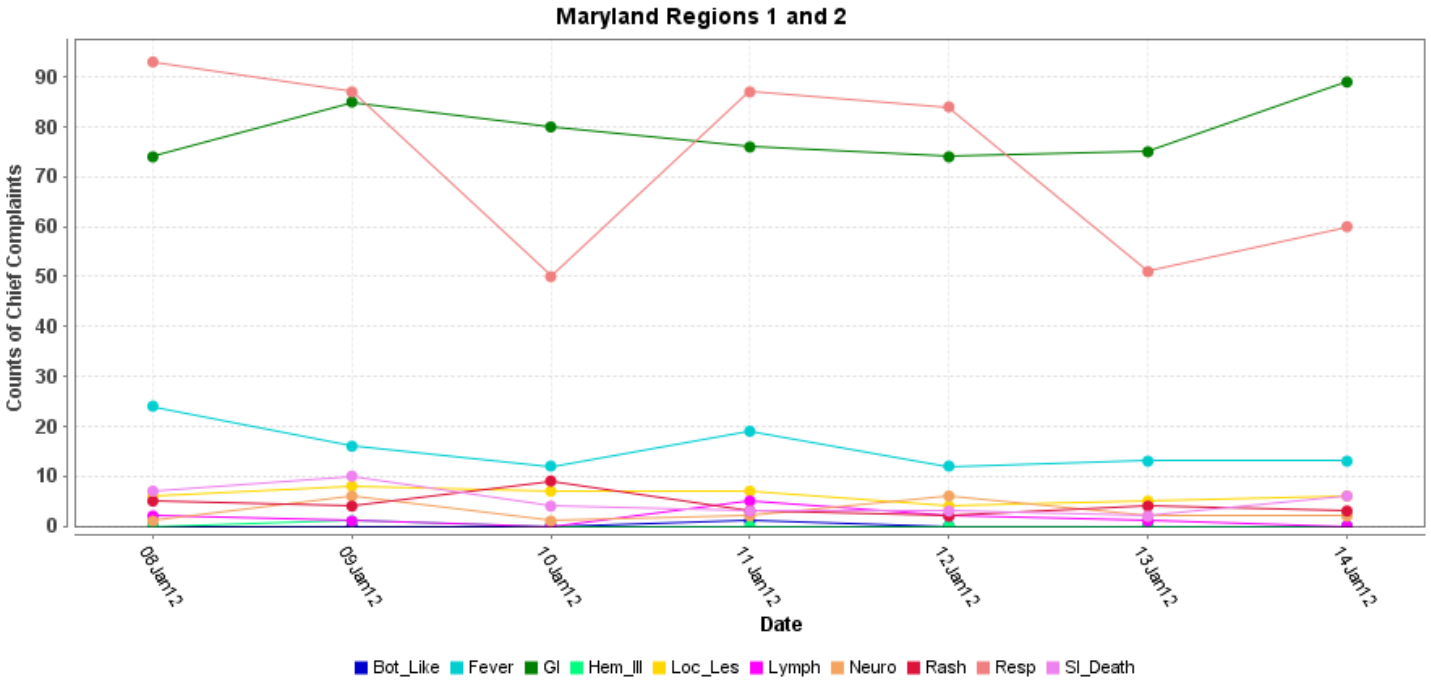
SYNDROMIC SURVEILLANCE REPORTS
ESSENCE (Electronic Surveillance System for the Early Notification of Community-based Epidemics):
Graphical representation is provided for all syndromes, excluding the "Other" category, all age groups, and red alerts are circled. Red alerts are generated when observed count for a syndrome exceeds the 99% confidence interval. Note: ESSENCE – ANCR uses syndrome categories consistent with CDC definitions.

Overall, no suspicious patterns of illness were identified. Track backs to the health care facilities yielded no suspicious patterns of illness.

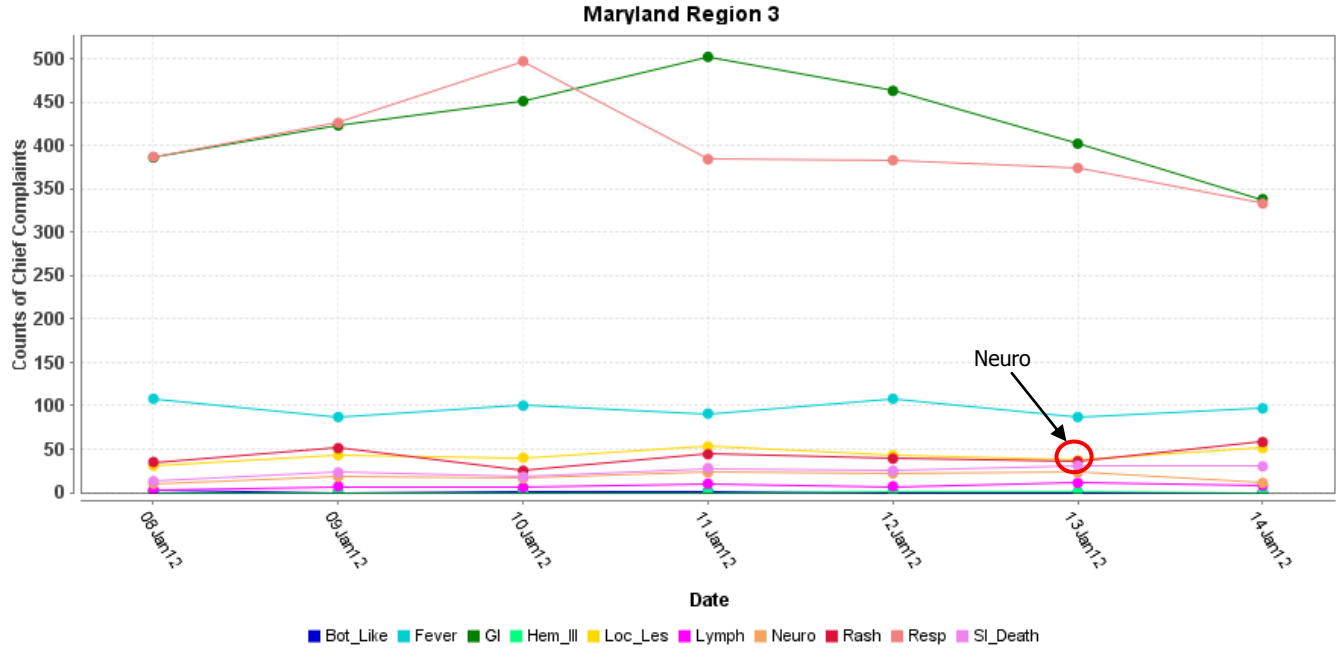


*Includes EDs in all jurisdictions in the NCR (MD, VA, and DC) reporting to ESSENCE

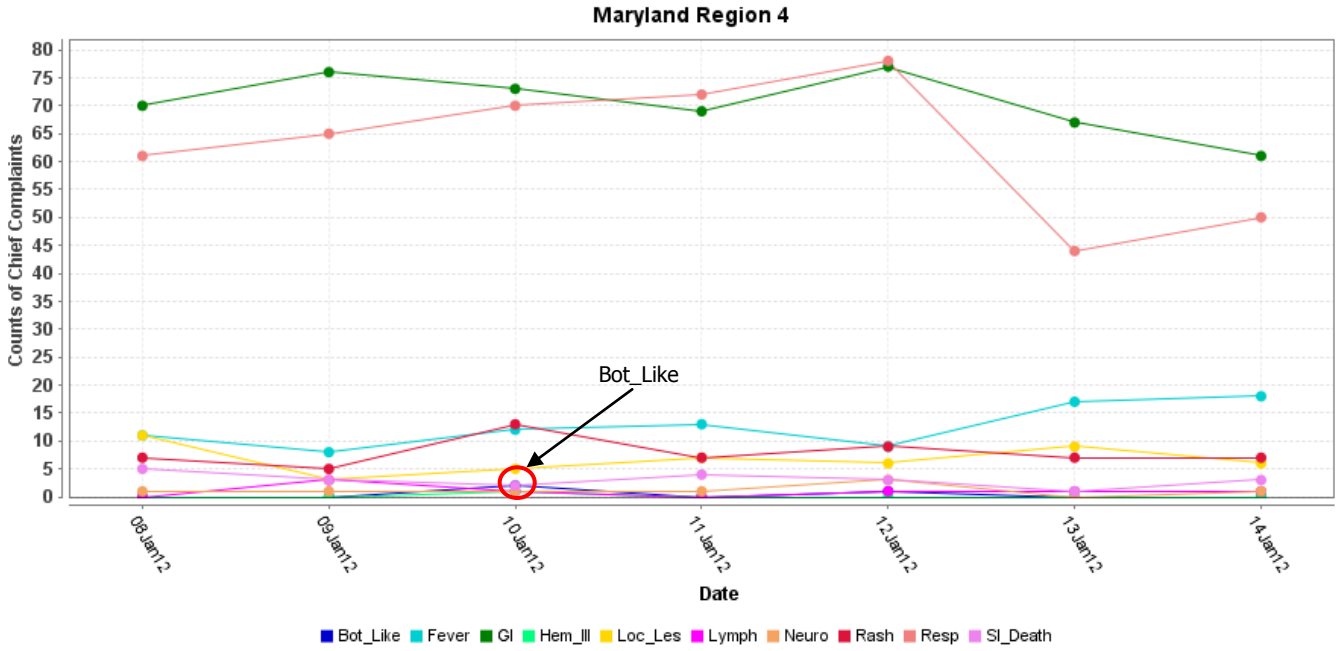
MARYLAND ESSENCE:



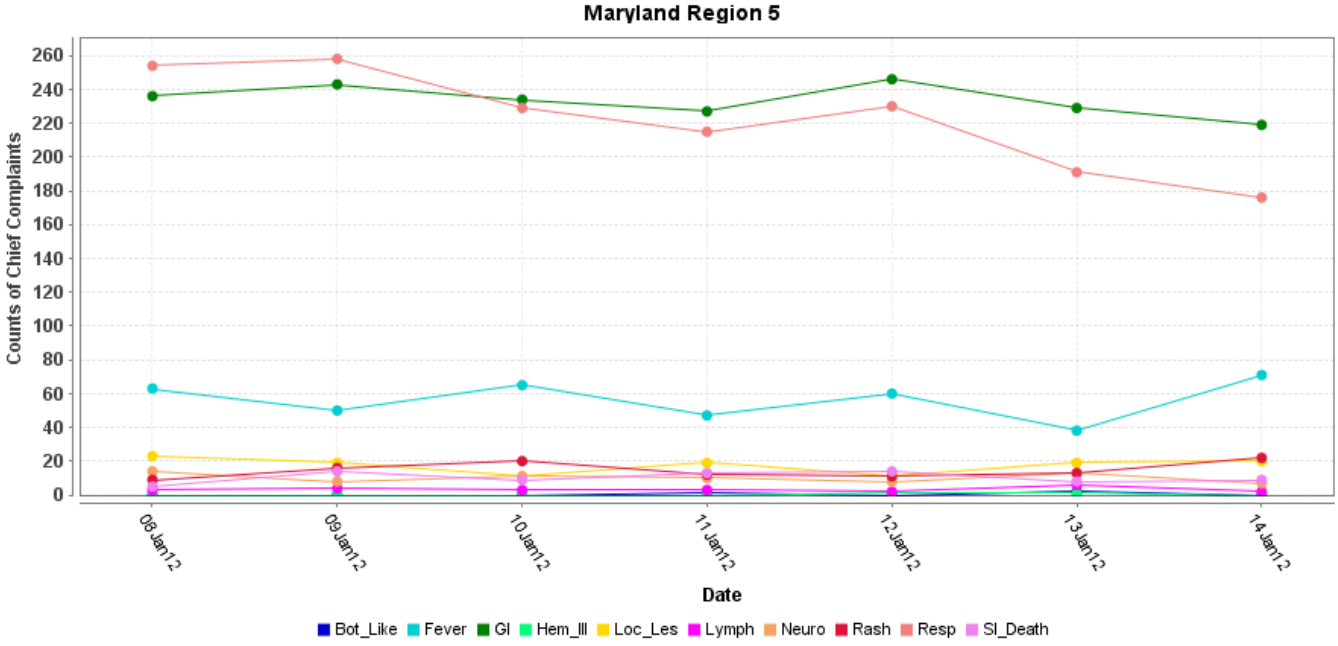
* Region 1 and 2 includes EDs in Allegany, Frederick, Garrett, and Washington counties reporting to ESSENCE



* Region 3 includes EDs in Anne Arundel, Baltimore City, Baltimore, Carroll, Harford, and Howard counties reporting to ESSENCE



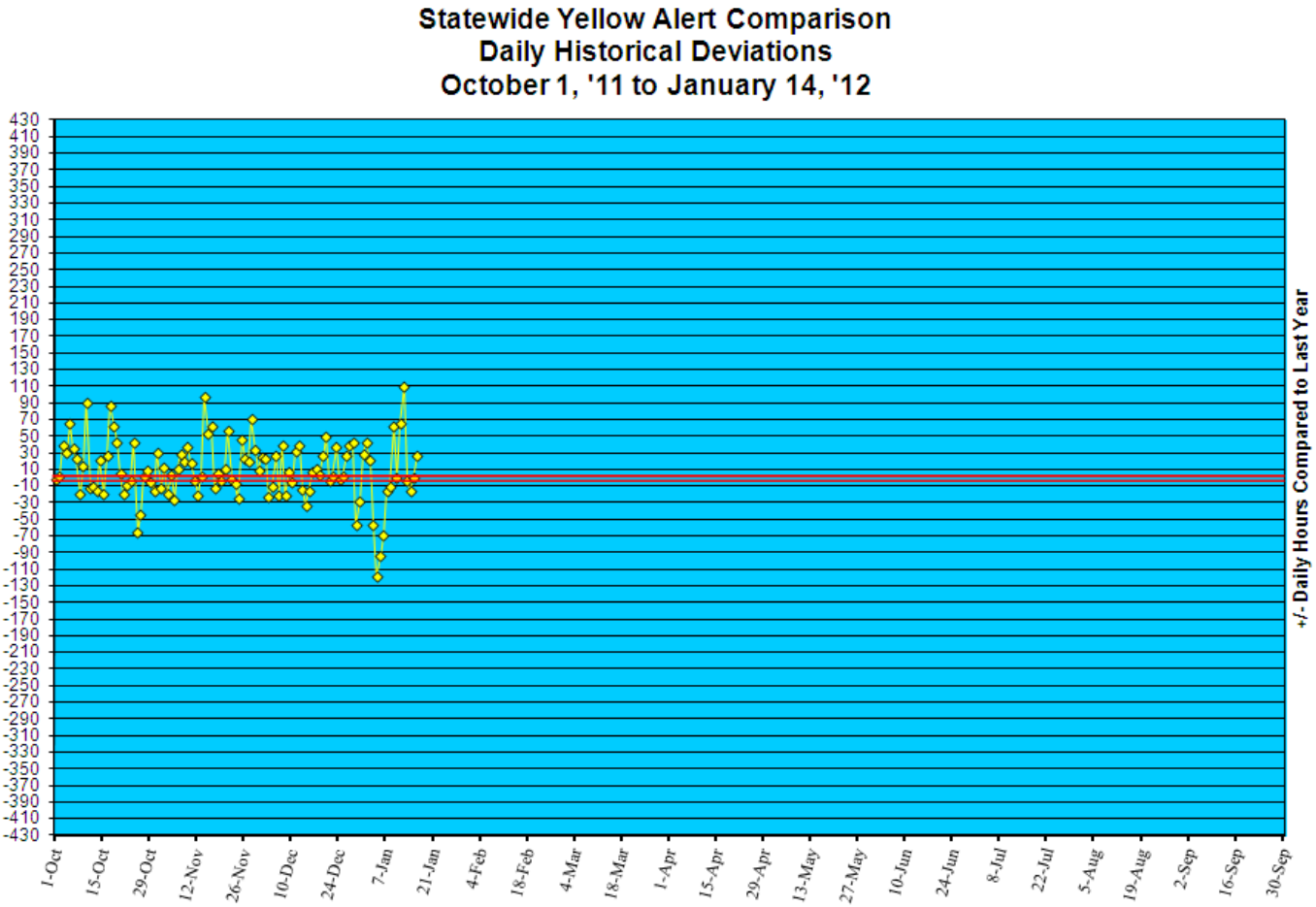
* Region 4 includes EDs in Cecil, Dorchester, Kent, Somerset, Talbot, Wicomico, and Worcester counties reporting to ESSENCE



* Region 5 includes EDs in Calvert, Charles, Montgomery, Prince George's, and St. Mary's counties reporting to ESSENCE

REVIEW OF EMERGENCY DEPARTMENT UTILIZATION

YELLOW ALERT TIMES (ED DIVERSION): The reporting period begins 10/01/11.



REVIEW OF MORTALITY REPORTS

Office of the Chief Medical Examiner: OCME reports no suspicious deaths related to an emerging public health threat for the week.

MARYLAND TOXIDROMIC SURVEILLANCE

Poison Control Surveillance Monthly Update: Investigations of the outliers and alerts observed by the Maryland Poison Center and National Capital Poison Center in October 2011 did not identify any cases of possible public health threats.

REVIEW OF MARYLAND DISEASE SURVEILLANCE FINDINGS

COMMUNICABLE DISEASE SURVEILLANCE CASE REPORTS (confirmed, probable and suspect):

Meningitis:	**Aseptic**	**Meningococcal**
New cases (January 8 – January 14, 2012):	17	0
Prior week (January 1 – January 7, 2012):	7	0
Week#2, 2011 (January 9 – January 15, 2011):	15	0

10 outbreaks were reported to DHMH during MMWR Week 2 (January 8 – January 14, 2012)

7 Gastroenteritis outbreaks
6 outbreaks of GASTROENTERITIS in Nursing Homes
1 outbreak of GASTROENTERITIS in a School

1 Foodborne outbreak
1 outbreak of GASTORENTERITIS/FOODBORNE associated with a Restaurant

1 Respiratory illness outbreak
1 outbreak of PNEUMONIA in a Nursing Home

1 Rash illness outbreak
1 outbreak of RASH ILLNESS in a School

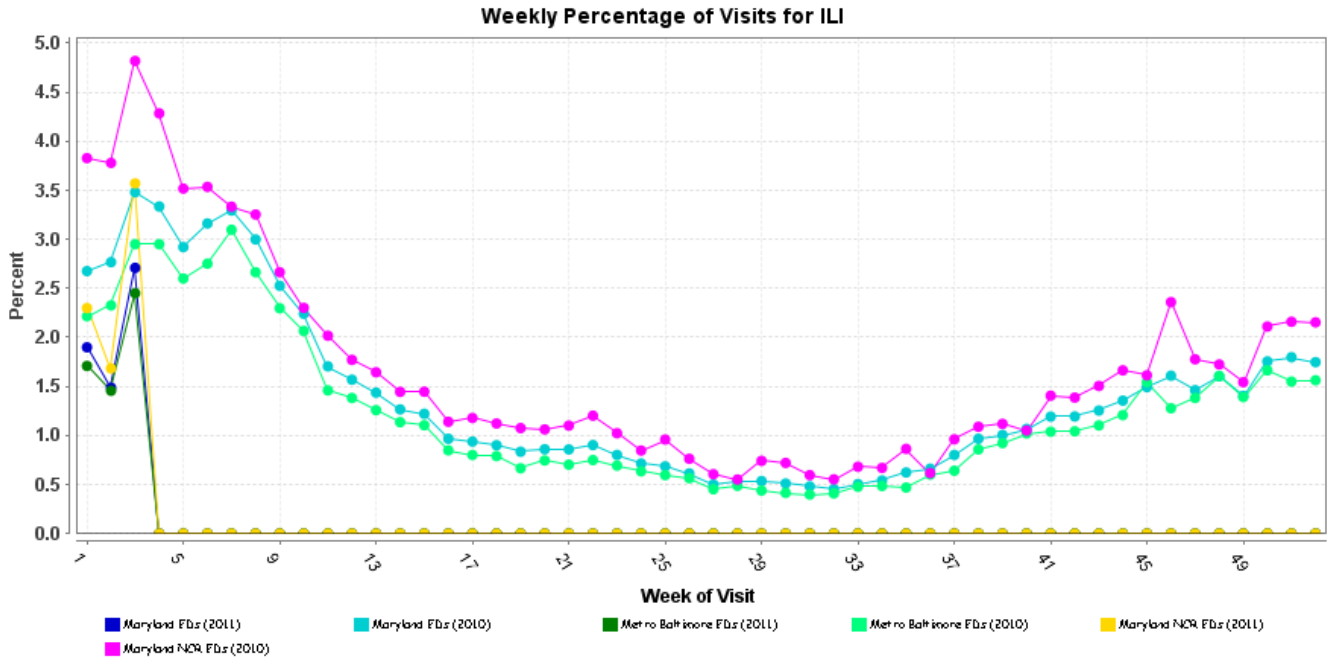
MARYLAND SEASONAL FLU STATUS

Seasonal Influenza reporting occurs October through May. Seasonal influenza activity for Week 1 was: No activity, Minimal Intensity.

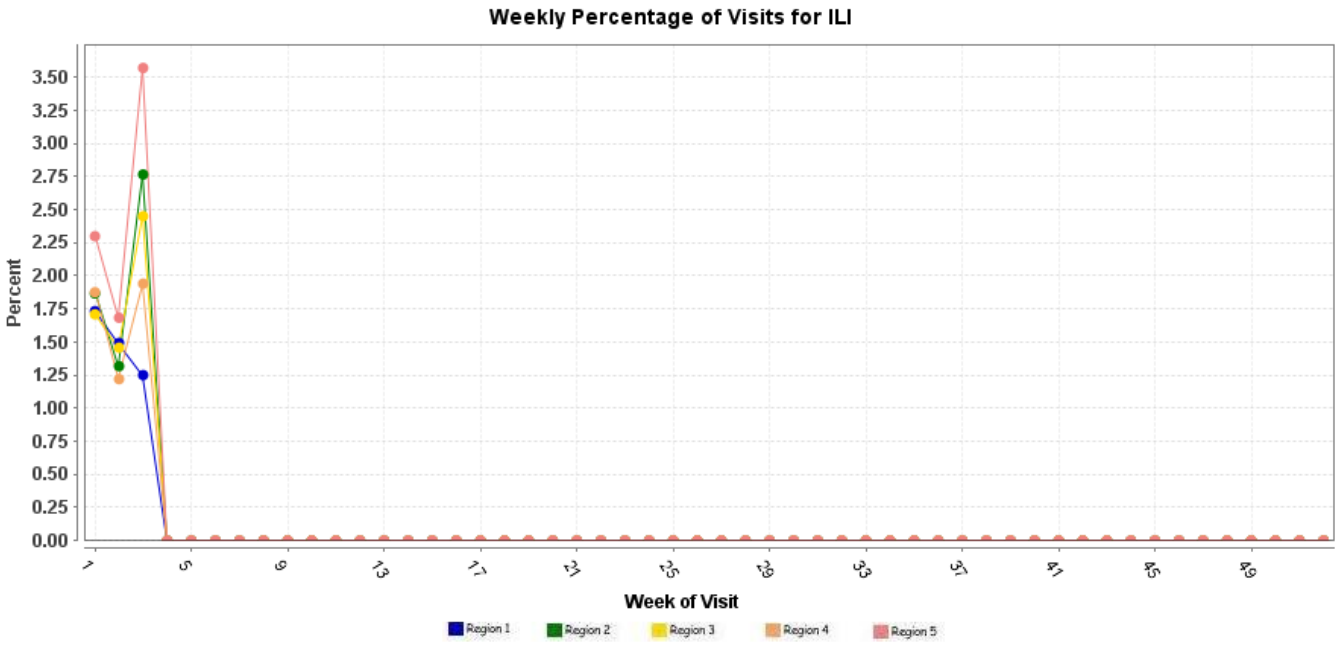
SYNDROMIC SURVEILLANCE FOR INFLUENZA-LIKE ILLNESS

Graphs show the percentage of total weekly Emergency Department patient chief complaints that have one or more ICD9 codes representing provider diagnoses of influenza-like illness. These graphs do not represent confirmed influenza.

Graphs show proportion of total weekly cases seen in a particular syndrome/subsyndrome over the total number of cases seen. Weeks run Sunday through Saturday and the last week shown may be artificially high or low depending on how much data is available for the week.



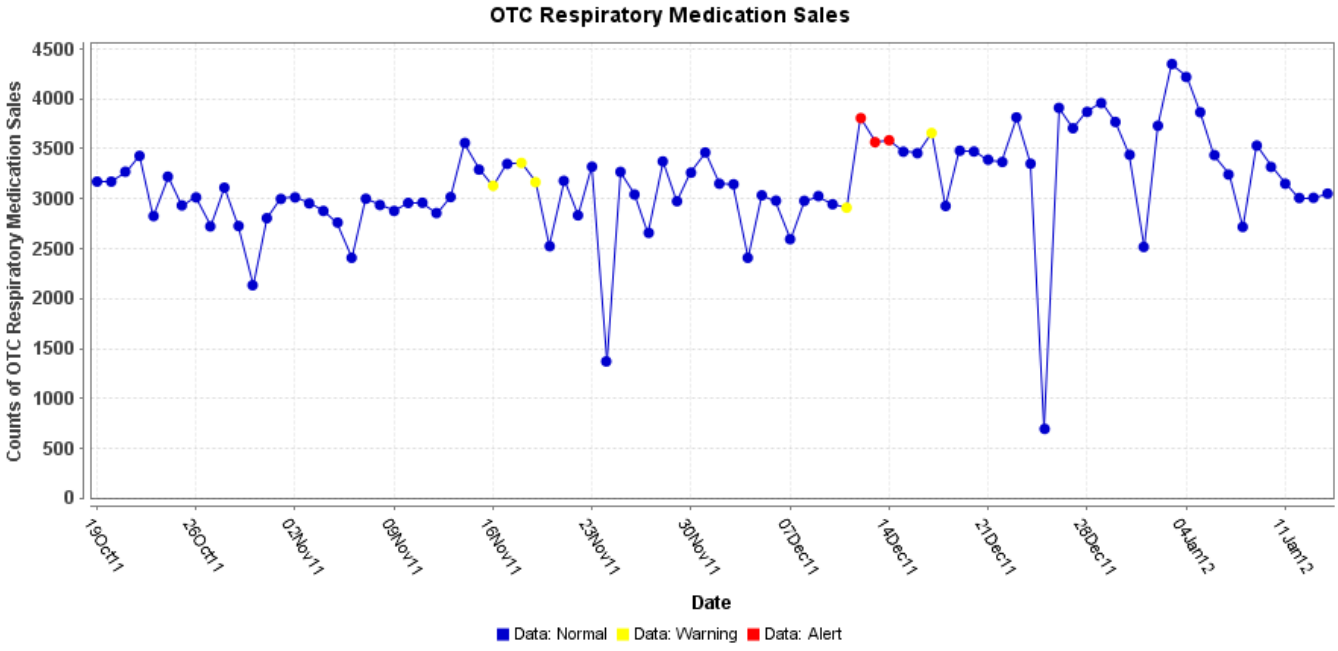
* Includes 2010 and 2011 Maryland ED visits for ILI in Metro Baltimore (Region 3), Maryland NCR (Region 5), and Maryland Total



*Includes 2011 Maryland ED visits for ILI in Region 1, 2, 3, 4, and 5

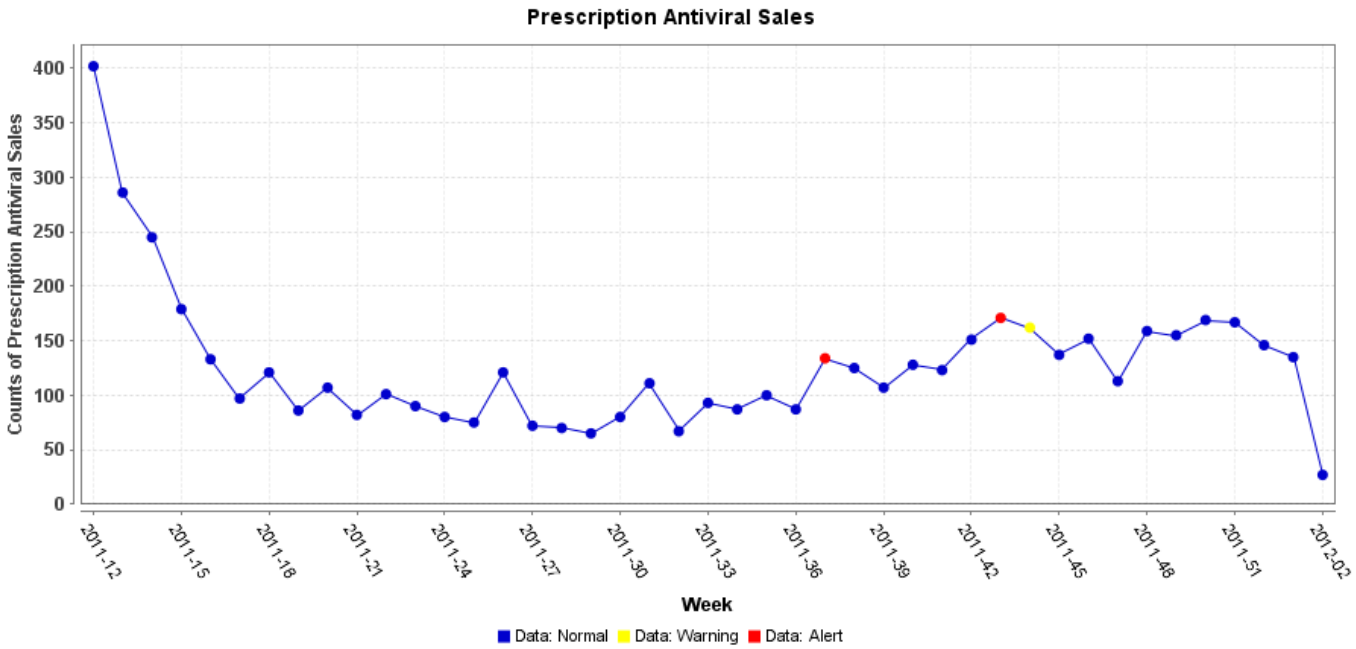
OVER-THE-COUNTER (OTC) SALES FOR RESPIRATORY MEDICATIONS:

Graph shows the daily number of over-the-counter respiratory medication sales in Maryland at a large pharmacy chain.



PRESCRIPTION ANTIVIRAL SALES:

Graph shows the weekly number of prescription antiviral sales in Maryland.



PANDEMIC INFLUENZA UPDATE / AVIAN INFLUENZA-RELATED REPORTS

WHO update: The current WHO phase of pandemic alert for avian influenza is 3. Currently, the avian influenza H5N1 virus continues to circulate in poultry in some countries, especially in Asia and northeast Africa. This virus continues to cause sporadic human infections with some instances of limited human-to-human transmission among very close contacts. There has been no sustained human-to-human or community-level transmission identified thus far.

In **Phase 3**, an animal or human-animal influenza reassortant virus has caused sporadic cases or small clusters of disease in people, but has not resulted in human-to-human transmission sufficient to sustain community-level outbreaks. Limited human-to-human transmission may occur under some circumstances, for example, when there is close contact between an infected person and an unprotected caregiver. However, limited transmission under such restricted circumstances does not indicate that the virus has gained the level of transmissibility among humans necessary to cause a pandemic.

As of January 6, 2012, the WHO-confirmed global total of human cases of H5N1 avian influenza virus infection stands at 576, of which 339 have been fatal. Thus, the case fatality rate for human H5N1 is approximately 59%.

NATIONAL DISEASE REPORTS

BUSHMEAT TRADE, DISEASE TRANSMISSION RISK: 11 January, 2012, Much of the trade in wildlife meat, or bushmeat, has its origin in Africa. Scientists have documented potentially dangerous viruses entering the US through illegally imported wildlife products. Testing of meats confiscated at American airports has revealed the presence of several pathogens that could pose a risk to human health. Retroviruses and herpesviruses were identified, some of them isolated from remains of endangered monkey species. The research study is reported in the journal PLoS One [see comment below]. Its authors say better surveillance measures are needed to ensure this trade does not result in the emergence of new disease outbreaks in humans. "Although the findings to date are from a small pilot study, they remind us of the potential public health risk posed by illegal importation of wildlife products -- a risk we hope to better characterize through expanded surveillance at ports of entry around the country," said Dr Kristine Smith, from EcoHealth Alliance, who led the investigation team. Scientists estimate that some 75 percent of emerging infectious diseases affecting people have come from contact with wildlife. Some of this is the result of animals biting humans, but the handling and consumption of infected meats is also considered a

significant route of transmission. Classic examples of infections that have jumped across the species include HIV/AIDS [Human immunodeficiency virus/Acquired immunodeficiency syndrome], which is thought to have originated in primates, and SARS [Severe acute respiratory syndrome], an infection that caused global concern in 2003. Follow-up work traced its beginnings to Chinese restaurant workers butchering the cat-like Asian palm civet. The PLoS One study is a 1st attempt to screen for potentially hazardous pathogens in confiscated meat products entering the US. The scientists examined animal remains passing through 5 international airports, including John F Kennedy in New York -- one of the busiest hubs in the world. The smuggled meats -- some found in postal packages, some discovered inside suitcases -- were tested 1st to make a species identification. This showed up several non-human primates, included baboon and chimpanzee, but also rodents. The raw, smoked and dried meats were then tested for a number of viruses known to be capable of infecting humans. Among the pathogens identified were a zoonotic retrovirus, simian foamy viruses [actually simian foamy viruses that nay be possible zoonotic retroviruses -- see comment below], and several nonhuman primate herpesviruses. No one really knows the scale of the illegal trade in wildlife meat, or bushmeat as it is often called, but a 2010 study estimated that 5 tonnes of the material per week was being smuggled in personal baggage through Roissy-Charles de Gaulle airport in Paris, France. And in addition to the meat products, there is a big trade in live wild animals. Much of this is perfectly legal and supplies the pet industry. Nonetheless, these animals also require improved pathogen surveillance, say the researchers. "Exotic wildlife pets and bushmeat are Trojan horses that threaten humankind at sites where they are collected in the developing world as well as the US. Our study underscores the importance of surveillance at ports, but we must also encourage efforts to reduce demand for products that drive the wildlife trade," said Ian Lipkin of Columbia University's Mailman School of Public Health. One key aspect of concern highlighted by the team was the identification in the samples of some endangered species, including the Guinea baboon and the sooty mangabey, an Old World monkey. Marcus Rowcliffe, from the Institute of Zoology in London, UK, and who was not connected with the research, commented: "The extent to which an intercontinental luxury meat market may be developing is of major concern, because if that is happening it could have very worrying impacts on wild populations. "This whole area is marked by a lot of unknowns which is why we need more studies like this." (Water Safety Threats are listed in Category B on the CDC List of Critical Biological Agents) *Non-suspect case

INTERNATIONAL DISEASE REPORTS

LEPTOSPIROSIS (PHILIPPINES): 12 January 2012, Hospitals on the island of Mindanao in the Philippines are on alert for cases of leptospirosis, a bacterial disease spread by rodents, following tropical storm Washi. According to local health care authorities, reports 314 cases and 8 deaths in the cities of Cagayan de Oro and Iligan in the archipelago. The Washi storm hit about a million people, and more than 1,250 died and 100 are still missing. In addition, 38 000 people have taken shelter in 54 evacuation centers in the area. About 80% of reported cases of leptospirosis on the island of Mindanao were among males, median age of 26, who had been working in clean-up details and thus exposed to polluted water. Residents who had not taken shelter in the evacuation centers were particularly vulnerable and cannot be given medication or treatment. However, despite the outbreak, the levels of leptospirosis are still nowhere near those reported during Typhoon Ketsana in 2009, when there were more than 2 000 cases and 167 deaths reported deaths. According to the Emerging Health Threats for the Philippine National Red Cross (PNRC), the alarm remains high. The accumulated mud is still a potential source of infection. It may contain bacteria from the carcasses of rodents or their feces and urine that remain in the soil. In addition, the clearing of some areas will remain difficult until the water service is resumed, seriously damaged, in the two cities. Currently only a few pipelines are partially functional. The health department has distributed rapid diagnosis kits to test early symptoms of the disease. (Water Safety Threats are listed in Category B on the CDC List of Critical Biological Agents) *Non-suspect case

CHOLERA (HAITI): 11 January 2012, On 5 Jan 2012, the Haiti Epidemic Advisory System (HEAS) lit up abruptly with reports of 200 cases of cholera and 17 fatalities (CFR-apparent 8.5 percent) in Pestel, located in an extremely remote area of Haiti. Almost exactly one year after HEAS partners did an emergency helicopter drop of medical supplies. The HEAS hit a new operational record of about 2 hours between initial warning and confirmation of an emergency response package made available by several members of the HEAS, including Direct Relief International. Back and forth between officials at MSPP, PAHO, and CDC indicated they were unaware of the situation and vehemently denied the reports for 72 hours... but later came back to us and said it was not only 200 cases, but 300. The ground team just arrived, confirming 300 cases in 2 of the 4 surrounding villages (survey of the other 2 villages pending). They discovered 55 fatalities (CFR-apparent of 18 percent), not the previously reported 17. (Water Safety Threats are listed in Category B on the CDC List of Critical Biological Agents) *Non-suspect case

ANTHRAX (INDIA): 8 January, 2012, The enthusiasm of Palamur University students in the Mahbubnagar district of Andhra Pradesh, 170 km from here, led to a chance finding of deadly anthrax [spores] in ground water of more than 26 habitations. Dr Pawan Kumar, head of the department of microbiology, sent his students to the nearby villages to bring in water samples for a project, and they collected samples of the coloured water from open water bodies and tested them in the laboratory. Shocked by what he found, Dr Kumar sent the samples to the Centre for Cellular and Molecular Biology, which he said confirmed his worst fears. "The water has *Bacillus anthracis* bacteria, which causes anthrax, a zoonotic disease that is transmissible to humans through handling or consumption of contaminated animal products," he said. The etiologic agent of anthrax, *Bacillus anthracis*, is a spore-forming gram-positive bacillus. Although anthrax can be found globally in temperate zones, it is more often a risk in countries with less standardised and less effective public health programs. Water samples were collected from Alampur, Devarakonda, Lingala, Aamanagallu, Atmakur, Khillaghanapuram, Papireddyguda, Midjil, and Kodangal. The water has been [presumably] contaminated from raw sewerage, blood and animal products from abattoirs. "The villagers in these places, even in a tourist spot such as Alampur, drink this water day in and day out. They are suffering from unknown diseases, many with ulcers, so we want to go further and seek protected water for our people," Venkat Reddy, a student, said. According Dr Samuel, Superintendent of Mahbubnagar Government Hospital, humans can become infected with *B. anthracis* by handling products or consuming undercooked meat from infected animals. Infection may also result from inhalation of *B. anthracis* spores from contaminated animal products, such as wool, or the intentional release of spores during a bioterrorist attack. (Anthrax is listed in Category A on the CDC List of Critical Biological Agents) *Non-suspect case

OTHER RESOURCES AND ARTICLES OF INTEREST

More information concerning Public Health and Emergency Preparedness can be found at the Office of Preparedness and Response website: http://preparedness.dhmh.maryland.gov/

Maryland's Resident Influenza Tracking System: http://dhmh.maryland.gov/flusurvey

****

NOTE: This weekly review is a compilation of data from various surveillance systems, interpreted with a focus on a potential BT event. It is not meant to be inclusive of all epidemiology data available, nor is it meant to imply that every activity reported is a definitive BT event. International reports of outbreaks due to organisms on the CDC Critical Biological Agent list will also be reported. While not "secure", please handle this information in a professional manner. Please feel free to distribute within your organization, as you feel appropriate, to other professional staff involved in emergency preparedness and infection control.

For questions about the content of this review or if you have received this and do not wish to receive these weekly notices, please e-mail me. If you have information that is pertinent to this notification process, please send it to me to be included in the routine report.

Zachary Faigen, MSPH
Biosurveillance Epidemiologist
Office of Preparedness and Response
Maryland Department of Health & Mental Hygiene
300 W. Preston Street, Suite 202
Baltimore, MD 21201
Office: 410-767-6745
Fax: 410-333-5000
Email: ZFaigen@dhmh.state.md.us

Anikah H. Salim, MPH
Biosurveillance Epidemiologist
Office of Preparedness and Response
Maryland Department of Health & Mental Hygiene
300 W. Preston Street, Suite 202
Baltimore, MD 21201
Office: 410-767-2074
Fax: 410-333-5000
Email: ASalim@dhmh.state.md.us

Table: Text-based Syndrome Case Definitions and Associated Category A Conditions

Syndrome	Definition	Category A Condition
Botulism-like	ACUTE condition that may represent exposure to botulinum toxin ACUTE paralytic conditions consistent with botulism: cranial nerve VI (lateral rectus) palsy, ptosis, dilated pupils, decreased gag reflex, media rectus palsy. ACUTE descending motor paralysis (including muscles of respiration) ACUTE symptoms consistent with botulism: diplopia, dry mouth, dysphagia, difficulty focusing to a near point.	Botulism
Hemorrhagic Illness	SPECIFIC diagnosis of any virus that causes viral hemorrhagic fever (VHF): yellow fever, dengue, Rift Valley fever, Crimean-Congo HF, Kyasanur Forest disease, Omsk HF, Hantaan, Junin, Machupo, Lassa, Marburg, Ebola ACUTE condition with multiple organ involvement that may be consistent with exposure to any virus that causes VHF ACUTE blood abnormalities consistent with VHF: leukopenia, neutropenia, thrombocytopenia, decreased clotting factors, albuminuria	VHF
Lymphadenitis	ACUTE regional lymph node swelling and/ or infection (painful bubo- particularly in groin, axilla or neck)	Plague (Bubonic)
Localized Cutaneous Lesion	SPECIFIC diagnosis of localized cutaneous lesion/ ulcer consistent with cutaneous anthrax or tularemia ACUTE localized edema and/ or cutaneous lesion/ vesicle, ulcer, eschar that may be consistent with cutaneous anthrax or tularemia INCLUDES insect bites EXCLUDES any lesion disseminated over the body or generalized rash EXCLUDES diabetic ulcer and ulcer associated with peripheral vascular disease	Anthrax (cutaneous) Tularemia
Gastrointestinal	ACUTE infection of the upper and/ or lower gastrointestinal (GI) tract SPECIFIC diagnosis of acute GI distress such as Salmonella gastroenteritis ACUTE non-specific symptoms of GI distress such as nausea, vomiting, or diarrhea EXCLUDES any chronic conditions such as inflammatory bowel syndrome	Anthrax (gastrointestinal)

Syndrome Definitions for Diseases Associated with Critical Bioterrorism-associated Agents
(continued from previous page)

Syndrome	Definition	Category A Condition
Respiratory	ACUTE infection of the upper and/ or lower respiratory tract (from the oropharynx to the lungs, includes otitis media) SPECIFIC diagnosis of acute respiratory tract infection (RTI) such as pneumonia due to parainfluenza virus ACUTE non-specific diagnosis of RTI such as sinusitis, pharyngitis, laryngitis ACUTE non-specific symptoms of RTI such as cough, stridor, shortness of breath, throat pain EXCLUDES chronic conditions such as chronic bronchitis, asthma without acute exacerbation, chronic sinusitis, allergic conditions (Note: INCLUDE *acute exacerbation* of chronic illnesses.)	Anthrax (inhalational) Tularemia Plague (pneumonic)
Neurological	ACUTE neurological infection of the central nervous system (CNS) SPECIFIC diagnosis of acute CNS infection such as pneumoccocal meningitis, viral encephailitis ACUTE non-specific diagnosis of CNS infection such as meningitis not otherwise specified (NOS), encephailitis NOS, encephalopathy NOS ACUTE non-specific symptoms of CNS infection such as meningismus, delerium EXCLUDES any chronic, hereditary or degenerative conditions of the CNS such as obstructive hydrocephalus, Parkinson's, Alzheimer's	Not applicable
Rash	ACUTE condition that may present as consistent with smallpox (macules, papules, vesicles predominantly of face/arms/legs) SPECIFIC diagnosis of acute rash such as chicken pox in person > XX years of age (base age cut-off on data interpretation) or smallpox ACUTE non-specific diagnosis of rash compatible with infectious disease, such as viral exanthem EXCLUDES allergic or inflammatory skin conditions such as contact or seborrheaic dermatitis, rosacea EXCLUDES rash NOS, rash due to poison ivy, sunburn, and eczema	Smallpox
Specific Infection	ACUTE infection of known cause not covered in other syndrome groups, usually has more generalized symptoms (i.e., not just respiratory or gastrointestinal) INCLUDES septicemia from known bacteria INCLUDES other febrile illnesses such as scarlet fever	Not applicable

Syndrome Definitions for Diseases Associated with Critical Bioterrorism-associated Agents
(continued from previous page)

Syndrome	Definition	Category A Condition
Fever	ACUTE potentially febrile illness of origin not specified INCLUDES fever and septicemia not otherwise specified INCLUDES unspecified viral illness even though unknown if fever is present EXCLUDE entry in this syndrome category if more specific diagnostic code is present allowing same patient visit to be categorized as respiratory, neurological or gastrointestinal illness syndrome	Not applicable
Severe Illness or Death potentially due to infectious disease	ACUTE onset of shock or coma from potentially infectious causes EXCLUDES shock from trauma INCLUDES SUDDEN death, death in emergency room, intrauterine deaths, fetal death, spontaneous abortion, and still births EXCLUDES induced fetal abortions, deaths of unknown cause, and unattended deaths	Not applicable